Name of Work: Construction Of RO Plant and Drilling Of Borewells Installation Of Pump and Motors, Providing Pipeline and Additional Motor Pumps and Necessary Accessories To Existing Borewells In Bellahlli, Kattigenahlli, Chokkanahlli, Thirumenahalli, Palanahalli, Agrahara, Sampigenahlli, Srirampura, Jakkur, Kogilu In Ward No.05

Second and Part Bill

PMC

(Book No. 02)

RUDRAPRASAD CONSULTANTS
Structural Engineers, Architects &
Project Management Consultants

To,

Date: 10-06-2022

ASSISTANT EXECUTIVE ENGINEER

PROJECT SUB DIVISION

BBMP

BANGALORE

Dear Sir,

Sub: M/s. Rudraprasad Consultants Services for the work of **"CONSTRUCTION OF RO PLANT AND DRILLING OF BOREWELLS INSTALLATION OF PUMP AND MOTORS, PROVIDING PIPELINE AND ADDITIONAL MOTOR PUMPS AND NECESSARY ACCESSORIES TO EXISTING BOREWELLS IN BELLAHLLI, KATTIGENAHLLI, CHOKKANAHALLI, THIRUMENAHALLI, PALANAHALLI, AGRAHARA, SAMPIGENAHALLI, SRIRAMPURA, JAKKUR, KOGILU IN WARD NO.05."**

Ref: 1. Work Order No: **EE(Project)/ Ynk Zone / WO/46/2020-21**

2. Job code: **005-20-000013**

We are here with forwarding to **M/s Sathya Borewell Cleaning, No.10, Ram Rao Building, T Dasarahalli, Bangalore-560057,** Second and Part Bill duly verified and certified that the work is satisfactory and for a Gross Value of Rs. 3,44,76,851.00/- (Rs. Three Crore Forty Four Lakhs Seventy Six Thousand Eight Hundred and Fifty One Only). First and Part bill for Rs. 4,45,17,003/- were previously submitted & the total bill amount submitted till date being Rs. 7,89,93,854/-(Rs.Seven Crore Eighty Nine Lakhs Ninty Three Thousand Eight Hundred and Fifty Four Only).

Thanking you,

Yours faithfully,

For Rudraprasad Consultants

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

R. KARTHIK RECHAN B.E, M.S (U.S.A)
PRINCIPAL CONSULTANT
RUDRAPRASAD CONSULTANTS

Attachments PMC Compliance report

#3, 7th Main Malleswaram, Bangalore – 560003
Telefax: 9180 23444801, Mobile: 91 9972924526
Web: www.arkengineers.com e-mail: rechan6630@yahoo.co.in

RUDRAPRASAD CONSULTANTS
Structural Engineers, Architects &
Project Management Consultants

NAME OF WORK:- **Construction of RO Plant and Drilling of Borewells installation of Pump and motors, providing pipeline and additional motor pumps and necessary accessories to existing borewells in Bellahlli, Kattigenahlli, Chokkanahlli, Thirumenahalli, Palanahalli,Agrahara, Sampigenahlli, Srirampura, Jakkur, Kogilu in Ward No.05**

Name of Client : EXECUTIVE ENGINEER, PROJECT DIVISION, BBMP, BANGALORE

Contractor/ Agency: M/s Sathya Borewell Cleaning, No.10, Ram Rao Building, T Dasarahalli, Bangalore-560057

Total Cost : Rs. 3,44,76,851.00/-

Date Of Inspection : 10-06-22

Status Of Bill : Second & Part Bill

In the Presence of : a) Assistant Engineer Project division, BBMP, Bangalore
b) R. Karthik Rechan, Partner, M/S RUDRAPRASAD CONSULTANTS, BANGALORE

PMC COMPLIANCE REPORT		
Sl. No.	Description of work	Comments/Observations
1	Geophysical investigation of site for sinking borewell for supplying drinking water to the habitation either through the hand pump, MWS or P.W.S.S. by vertical electrical sounding by adopting venner or schlumbergers's method, including reconnaissance survey of geological formation, Geological investigation of existing ground water in vicinity, its quality, quantity & acceptability of the users indicating the location of site, recommended depth of casing pipe required to seal the top unconsolidated	Work done upto the Billed Quantity and the Quality is satisfactory

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2	Sinking of borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above 900 CMF & above in all strata including over budern upto 20 m. fixing of casing pipes, collars & cap with necessary cutting, threading & welding including transportation of rig and supporting vehicle, crew charges & cost of consumables etc., complete including yield testing at the final depth with minimum working of compressor for one hour(excluding cost of casing pipes, collars, cap etc.,) 0 to 50 m	Work done upto the Billed Quantity and the Quality is satisfactory
3	Sinking of borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above 900 CMF & above in all strata including over budern upto 20 m. fixing of casing pipes, collars & cap with necessary cutting, threading & welding including transportation of rig and supporting vehicle, crew charges & cost of consumables etc., complete including yield testing at the final depth with	Work done upto the Billed Quantity and the Quality is satisfactory
4	Sinking of borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above 900 CMF & above in all strata including over budern upto 20 m. fixing of casing pipes, collars & cap with necessary cutting, threading & welding including transportation of rig and supporting vehicle, crew charges & cost of consumables etc., complete including yield testing at the final depth with minimum working of compressor for one hour(excluding cost of casing pipes, collars, cap etc.,) 100 to 150 m	Work done upto the Billed Quantity and the Quality is satisfactory
5	Sinking of borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above 900 CMF & above in all strata including over budern upto 20 m. fixing of casing pipes, collars & cap with necessary cutting, threading & welding including transportation of rig and supporting vehicle, crew charges & cost of consumables etc., complete including yield testing at the final depth with minimum working of compressor for one hour(excluding cost of casing pipes, collars, cap etc..)	Work done upto the Billed Quantity and the Quality is satisfactory

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6	Sinking of borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above 900 CMF & above in all strata including over budern upto 20 m. fixing of casing pipes, collars & cap with necessary cutting, threading & welding including transportation of rig and supporting vehicle, crew charges & cost of consumables etc., complete including yield testing at the final depth with minimum working of compressor for one hour(excluding cost of casing pipes, collars, cap etc.,)	Work done upto the Billed Quantity and the Quality is satisfactory
7	Sinking of borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above 900 CMF & above in all strata including over budern upto 20 m. fixing of casing pipes, collars & cap with necessary cutting, threading & welding including transportation of rig and supporting vehicle, crew charges & cost of consumables etc., complete including yield testing at the final depth with minimum working of compressor for one hour(excluding cost of casing pipes, collars, cap etc.,) 250 to 300 m	Work done upto the Billed Quantity and the Quality is satisfactory
8	Sinking of borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above 900 CMF & above in all strata including over budern upto 20 m. fixing of casing pipes, collars & cap with necessary cutting, threading & welding including transportation of rig and supporting vehicle, crew charges & cost of consumables etc., complete	Work done upto the Billed Quantity and the Quality is satisfactory
9	Sinking of borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above 900 CMF & above in all strata including over budern upto 20 m. fixing of casing pipes, collars & cap with necessary cutting, threading & welding including transportation of rig and supporting vehicle, crew charges & cost of consumables etc., complete including yield testing at the final depth with	Work done upto the Billed Quantity and the Quality is satisfactory

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10	Supplying of ISI Mark 175 mm nominal bore medium black ERW casing pipe of 5mm thick black electric resistance continous welded midle steel tube material confirming to IS 1387/1993 and manufactured from hot rolled steel skelp/stripes in random length of 4 to 7 mtr both ends threaded confirming to IS 554/1985 one end(including of all taxes)	Work done upto the Billed Quantity and the Quality is satisfactory
11	Providing and fixing 250mm dia PVC pipe and as per specification and directions.	Work done upto the Billed Quantity and the Quality is satisfactory
12	175 mm dia M.S. Casing cap	Work done upto the Billed Quantity and the Quality is satisfactory
13	M.S. Casing pipe collars 'C' Class	Work done upto the Billed Quantity and the Quality is satisfactory
14	Fabricating supplying and mounting MS box of 16 SWG suitable for floor / wall mounting, fully weather proof with provision for better hear description, (providing with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished 2 coats of red oxide primes paint and finally finished with approved colour enamelled metal paint etc,. complete box of 21600 sq cm	Work done upto the Billed Quantity and the Quality is satisfactory
15	Labour charges for erection of new /repaired submersible pumpset along with GI pipes (32/50mm) cable (new submersible pumpset if required will be supplied by the department free of cost and released pump set should be handed over to department) including transportation (each length = 6.00m)	Work done upto the Billed Quantity and the Quality is satisfactory
16	Supplying and fixing of Porcelain fuse channel with cut out on existing wooden / panel using necessary nuts, bolts and washer etc., complete….	Work done upto the Billed Quantity and the Quality is satisfactory

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17	Supplying and laying of L.T.U.G Cable having aluminiumconductor PVC insulated shethed galvanised steel wire/ steel tape armoured cable with PVC outer sheathing 1.1 KV class 4 core 16 sqmm cable (confirming to IS 1554)	Work done upto the Billed Quantity and the Quality is satisfactory
18	Digging of trenches of 0.6mm x 0.50 Mtrs wide refilling the trench to the required ground level and consolidating etc,. Complete sutting road surfaces	Work done upto the Billed Quantity and the Quality is satisfactory
19	Supplying and fixing Class-A GI Pipe on pole/ wall/drain crossing with necessary clamping arrangements for UG Cable of 1.1 KV class 40mm	Work done upto the Billed Quantity and the Quality is satisfactory
20	Supplying and fixing wiring earth electrode for grounding conduits, IC cutouts and other equipments on the meter board using 40mm dia 2.90 mm thick GI pipe 2.5 mtr long buried in a pit,/ the pit should be filled with equal proportion of salt and charocal 150 mm alround the pipe to complete depth the connections from the pipe to the conduit etc,. is to be established though GI wire of size as per ISI specification 7.3.3 of ISI 732 using 12mm dia boalts, nuts washers and checknuts etc,. the pipe shall have 16 through holes of 122mm dia	Work done upto the Billed Quantity and the Quality is satisfactory
21	Supply and fixing LT cast iron pot heads suitable for 1.1 KV class 16 sqmmUG cable filled with necessary bitumen/ insulating compound complete with terminals, clamps, bolts nuts and washers etc,	Work done upto the Billed Quantity and the Quality is satisfactory
22	Supplying and fixing of polished wood board made of not less than 15mm thick plank on both sides with planks made out on not more than 2 pieces and fixing the same to wall using tapered inverted wooden plugs screws etc., Size 20 x 20 x 2.5 inches	Work done upto the Billed Quantity and the Quality is satisfactory

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23	Cleaning of bore well inciuding yield tetsting of borewell either using slow or fast rig for not more than 2 hours at the final depth with air compressor or suitable pump as per specification (PRED 12-13 SL NO.9.5 PAGE NO.49)	Work done upto the Billed Quantity and the Quality is satisfactory
24	Borewell Clamp Set	Work done upto the Billed Quantity and the Quality is satisfactory
25	Supply & delivery at site brand new texmo/innoval/lubi/sabar /Atalanta/calamal/ waterman/Radha make suitable HP deep well submercible pumpset suitable for vertical installation in 150 dia borewells compressing of single stage or multistage CF pump close coupled by means of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water squirrel cagesubmercible induction motor suitable for operation of 3Ph, 50Hz.380/440 volts AC supply fitted with required accessories such as suction, casing, suction strainers, sand guard. Non return valve etc Complete the pump and motor shall from an integral unit with all the required fittings 17.5HP 30 Stage	Work done upto the Billed Quantity and the Quality is satisfactory
26	Supply & delivery at site brand new texmo/innoval/lubi/sabar /Atalanta/calamal/ waterman/Radha make suitable HP deep well submercible pumpset suitable for vertical installation in 150 dia borewells compressing of single stage or multistage CF pump close coupled by means of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water squirrel cagesubmercible induction motor suitable for operation of 3Ph, 50Hz.380/440 volts AC supply fitted with required accessories such as suction, casing, suction strainers, sand guard. Non return valve etc Complete the pump and motor shall from an integral unit with all the required fittings 20 HP 40 Stage	Work done upto the Billed Quantity and the Quality is satisfactory

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27	Providing, laying & jointing GI pipes confirming to IS specification of approved make with fittings such as collars bends elbows tees nipples plugs with cuts threads using white lead & threads for joints wherever necessary as per direction including all lead & lift etc,. complete 'A' grade(excluding cost of fittings) 50mm dia GI pipe B Class	Work done upto the Billed Quantity and the Quality is satisfactory
28	Supply and fixing Heavy Collar for GI Pipes 50MM	Work done upto the Billed Quantity and the Quality is satisfactory
29	Supplying of submersible pump cable 1X3X6..0 Sq.mm	Work done upto the Billed Quantity and the Quality is satisfactory
30	Supplying & delivery at site brand new / Essen / Lotus sunsines/Adarsh/ Gk controls best indigenous make combine energy meter-cum-control panel board unit of size 1200 x 600 x 300 mm minimum mechanically strong and vermin and water proof the unit shall have two detachable doors suitable for operation on 3ph, 50Hz, 380/440 volts, AC supply with spring loaded latch locking with a key ribs should be provided inside the door , canopy apron and louvers ventilators shall be provided the combine energy mtr cum control panel board unit suitable for operation on 3ph, 50Hz, 380/440 AC supply shall be consisted etc,. completed T panel board shall be fabricated on single unit in the above components panel board for suitable pumpset above components panel board for suitable pumpset above Up to 20HP with star delta starter (MR)	Work done upto the Billed Quantity and the Quality is satisfactory
31	Supplying & delivery of brand 50mm Gate Valve.	Work done upto the Billed Quantity and the Quality is satisfactory
32	Supplying & delivery of brand 50mm Non Return Valve.	Work done upto the Billed Quantity and the Quality is satisfactory

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33	Supplying and fixing MCB	Work done upto the Billed Quantity and the Quality is satisfactory
34	Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in Ordinary soil not exceeding 1.5 m in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m after breaking of clods complete as per specifications	Work done upto the Billed Quantity and the Quality is satisfactory
35	Providing and installing at site of work 63mm (0.662) PVC Pipes of 6 kg / cm2 including cost of pipes and specials and labour, including lowering into trenches, laying true to line, level and perfect linking at joints leak proof including jointing of approved type with all labour and lift charges, handling charges including encasing the pipe alround to a depth not less than 15cms with gravel or selected earth available from the excavation etc., complete	Work done upto the Billed Quantity and the Quality is satisfactory
36	Refilling available earth around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m and lift upto 1.5m including cost of all labour complete as per specifications	Work done upto the Billed Quantity and the Quality is satisfactory

20.05.15
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E1	Supply & delivery at site brand new texmo/innoval/lubi/sabar /Atalanta/calamal/ waterman/Radha make suitable HP deep well submercible pumpset suitable for vertical installation in 150 dia borewells compressing of single stage or multistage CF pump close coupled by means of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water squirrel cagesubmercible induction motor suitable for operation of 3Ph, 50Hz.380/440 volts AC supply fitted with required accessories such as suction, casing, suction strainers, sand guard. Non return valve etc Complete the pump and motor shall from an integral unit with all the required fittings	Work done upto the Billed Quantity and the Quality is satisfactory
E2	Supply & delivery at site brand new texmo/innoval/lubi/sabar /Atalanta/calamal/ waterman/Radha make suitable HP deep well submercible pumpset suitable for vertical installation in 150 dia borewells compressing of single stage or multistage CF pump close coupled by means of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water squirrel cagesubmercible induction motor suitable for operation of 3Ph, 50Hz.380/440 volts AC supply fitted with required accessories such as suction, casing, suction strainers, sand guard. Non return valve etc Complete the pump and motor shall from an integral unit with all the required fittings	Work done upto the Billed Quantity and the Quality is satisfactory

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E3	Supply & delivery at site brand new texmo/innoval/lubi/sabar /Atalanta/calamal/ waterman/Radha make suitable HP deep well submercible pumpset suitable for vertical installation in 150 dia borewells compressing of single stage or multistage CF pump close coupled by means of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water squirrel cagesubmercible induction motor suitable for operation of 3Ph, 50Hz.380/440 volts AC supply fitted with required accessories such as suction, casing, suction strainers, sand guard. Non return valve etc Complete the pump and motor shall from an integral unit with all the required fittings 10 HP 30 stage (P.NO-XLI, I.NO-31, PWD SR 18-19)	Work done upto the Billed Quantity and the Quality is satisfactory

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E4	Supply & delivery at site brand new texmo/innoval/lubi/sabar /Atalanta/calamal/ waterman/Radha make suitable HP deep well submercible pumpset suitable for vertical installation in 150 dia borewells compressing of single stage or multistage CF pump close coupled by means of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water squirrel cagesubmercible induction motor suitable for operation of 3Ph, 50Hz.380/440 volts AC supply fitted with required accessories such as suction, casing, suction strainers, sand guard. Non return valve etc Complete the pump and motor shall from an integral unit with all the required fittings 10 HP 20 stage (P.NO-XLI, I.NO-29, PWD SR 18-19)	Work done upto the Billed Quantity and the Quality is satisfactory
E5	Supplying of submersible pump cable 1X3X4.0 Sq.mm (Page No. XLVII, Sl NO. 7, PWD SR-2018-19	Work done upto the Billed Quantity and the Quality is satisfactory

29.2.20

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